

Claims

[c1] What is claimed is:

1.A method for attaching a integrated circuit (IC) package to a circuit board, the IC package having a plurality of electrical contacts, the plurality of electrical contacts being disposed on a major surface of the IC package in an arrangement having a perimeter, the method comprising:
positioning the IC package relative to the circuit board, such that the major surface of the IC package is adjacent to a major surface of the circuit board;
electrically connecting the IC package to the circuit board through the plurality of electrical contacts; and
disposing at least one anchor mechanically attaching the IC package to the circuit board;
wherein the anchor does not provide an electrical contact between the IC package and the circuit board.

[c2] 2.The method of claim 1 wherein the anchor is disposed at a location outside of the perimeter of the plurality of electrical contacts.

[c3] 3.The method of claim 2 wherein the major surface of the IC package has a rectangular shape, and the arrangement of the plurality of electrical contacts is a grid-like array.

[c4] 4.The method of claim 3 wherein the anchors are disposed at four corners of the major face of the IC package.

[c5] 5.The method of claim 3 wherein the anchors are disposed along four edges of the major face of the IC package.

[c6] 6.The method of claim 3 wherein the anchors are disposed on edges of the IC package.

[c7] 7.The method of claim 1 wherein the anchor is a pin.

[c8] 8.The method of claim 1 wherein the anchor is a metal straps.

[c9] 9.The method of claim 1 wherein the anchor is a redundant solder ball.

[c10] 10.The method of claim 1 wherein the anchor is a strip of solder.

[c11] 11.The method of claim 1 wherein electrically connecting the IC package to the circuit board and disposing anchors mechanically attaching the IC package to the circuit board are performed simultaneously and by the same device.

[c12] 12.The method of claim 1 wherein the electrical contacts are solder balls.

[c13] 13.The method of claim 1 wherein the electrical contacts are pins.